

**WHAT IS CLAIMED IS:**

1. A semi-automatic mortising machine, comprising:
  - a support base including two side walls arranged in the X-axis direction, and at least one platform mounted between the two side walls for placing at least one workpiece;
  - a support bar mounted on the support base in parallel with the X-axis direction and having at least one side face formed with a plurality of tenons which are arranged in parallel with the X-axis direction;
  - a guide device mounted between the platform of the support base and the support bar and operated in a manual manner to displace in parallel with the X-axis direction and in parallel with the Y-axis direction according to the profile of the tenons of the support bar; and
  - a working device moved with the guide device, and including a blade extended downward in the Z-axis direction to contact the workpiece, so that the blade can cut mortises and tenons in the workpiece according to the profile and distance of the tenons of the support bar.
2. The semi-automatic mortising machine in accordance with claim 1, wherein the support base includes two adjacent platforms each extended toward the horizontal face and the vertical face respectively
- 20 3. The semi-automatic mortising machine in accordance with claim 1, wherein the support base includes at least one positioning member including two rotation disks rotatably mounted between the two side walls of the support

base, a positioning rod eccentrically mounted between the two rotation disks, and a drive handle mounted on one of the two rotation disks for rotating the rotation disk, so that the positioning rod can be moved toward or away from the platform during rotation of the two rotation disks, so as to press the workpiece

5      on the platform or to release the workpiece from the platform.

4. The semi-automatic mortising machine in accordance with claim 1, wherein the support bar has a multi-angular cross-section and has a plurality of adjacent side faces each formed with a plurality of tenons which are spaced with a different distance on different side faces.

10        5. The semi-automatic mortising machine in accordance with claim 1, wherein the guide device includes two axial displacement rods each mounted between the two side walls of the support base, a slide seat slidably mounted on the two axial displacement rods to move in parallel with the X-axis direction, two radial displacement rods each extended through the slide seat to move in

15      parallel with the Y-axis direction, and a slide box fixed on the two radial displacement rods to move therewith.

20        6. The semi-automatic mortising machine in accordance with claim 5, wherein the guide device further includes an elastic member mounted between the slide seat and the slide box, so that the slide box is constantly moved toward the support bar.

7. The semi-automatic mortising machine in accordance with claim 6,  
wherein the elastic member is a spring mounted between a side of the slide seat  
and a side of the slide box.

8. The semi-automatic mortising machine in accordance with claim 6,  
5 wherein the elastic member includes a bolt screwed through a rear wall of the  
slide box along the Y-axis direction, and a compression spring urged between  
the bolt and the slide seat.

9. The semi-automatic mortising machine in accordance with claim 6,  
wherein the elastic member includes a press cylinder extended through a rear  
10 wall of the slide box along the Y-axis direction, and a piston rod secured on the  
slide seat and retractably mounted on the press cylinder.

10. The semi-automatic mortising machine in accordance with claim  
1, wherein the working device further includes a motor mounted on the guide  
device to rotate the blade.

15 11. The semi-automatic mortising machine in accordance with claim  
1, further comprising a distance adjusting device including a support rack  
mounted on the slide box and directed toward the support bar, a molding bar  
extended through the support rack and in parallel with the Y-axis direction, and  
a threaded rod screwed on the support rack and in parallel with the Y-axis  
20 direction, the molding bar has a first end formed with a molding end rested on  
the support bar and a second end formed with a locking end formed with a  
locking groove, the threaded rod has a bolt head locked in the locking groove

of the molding bar, the threaded rod is moved relative to the support rack to move the molding bar so as to adjust the distance of the molding end of the molding bar and the support bar.

12. The semi-automatic mortising machine in accordance with claim

5    1, further comprising an indication device including an indication bar secured on a front end of the side wall of the support base, and a direction bar secured on the slide box and located above the indication bar, the indication bar has a top face and a bottom face each formed with a plurality of recesses whose spaced distance is equal to that of the tenons of the support bar, when the slide  
10    box is moved along the track of the tenons of the support bar, the direction bar is moved with the slide box in the X-axis direction, so that the direction bar can align the position of each of the mortises and tenons of the workpiece with that of the respective recess of the indication bar, so as to indicate the working condition of the workpiece by the indication bar.

15    13. The semi-automatic mortising machine in accordance with claim

1, further comprising a dust collection box secured on the guide device and having an inside formed with opening in parallel with the Y-axis direction and directed toward the blade, a top face provided with a transparent window, and a side formed with a chip drain hole.